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**UNITED STATES DISTRICT COURT**  
**CENTRAL DISTRICT OF CALIFORNIA**

15 DMF, Inc., a California corporation,

Case No. 2:18-cv-07090-CAS-GJS

16 Plaintiff,

17 v.  
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**DECLARATION OF TIMOTHY S.**  
**FISHER IN SUPPORT OF**  
**OPPOSITION TO PLAINTIFF DMF,**  
**INC.'S MOTION FOR**  
**PRELIMINARY INJUNCTION**

AMP PLUS, INC., d/b/a ELCO  
LIGHTING, a California corporation;  
ELCO LIGHTING, INC., a California  
corporation,

Defendants.

Date: January 7, 2019  
Time: 10:00 a.m.  
Location: Courtroom 8D,  
350 West First Street, Los Angeles, CA

AMP PLUS, INC., d/b/a ELCO  
LIGHTING, a California corporation;

Counterclaimant,

v.

DMF, Inc., a California corporation,

Counter-Defendant.

## DECLARATION OF TIMOTHY S. FISHER

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1                   Overview of this Declaration

2                   1. I, Professor Timothy S. Fisher, have been retained as a technical expert  
3 by Bryan Cave LLP, counsel for AMP Plus, Inc. dba Elco Lighting, to analyze and  
4 respond to DMF, Inc.'s Motion for Preliminary Injunction dated December 17,  
5 2018; the Declaration of James R. Benya dated December 17, 2018; and related  
6 documents in the litigation entitled, *DMF, Inc. v. AMP Plus, Inc. dba Elco Lighting*,  
7 *et al.*, in the District Court for the Central District of California regarding United  
8 States Patent No. 9,964,266 ("the '266 Patent"). Unless otherwise noted, the facts  
9 and opinions set forth in this declaration are of my own personal knowledge, and if  
10 called to testify I could and would competently testify thereto.

11                   My Professional Qualifications

12                   2. My curriculum vitae is attached as Exhibit 18, and a brief summary of  
13 my professional qualifications and background follow. I received the Bachelor of  
14 Science degree in mechanical engineering from Cornell University in 1991, and the  
15 Doctor of Philosophy degree in mechanical engineering from the same institution in  
16 1998. I worked as a design engineer at Motorola's Automotive and Industrial  
17 Electronics Group from 1991 to 1993 before beginning my graduate studies.

18                   3. I joined UCLA's Mechanical and Aerospace Engineering faculty in  
19 2017 after 15 years at Purdue's School of Mechanical Engineering and several  
20 previous years at Vanderbilt University. In 2018 I was named Chair of the  
21 Mechanical and Aerospace Engineering Department and received the John P. and  
22 Claudia H. Schauerman Endowed Chair in Engineering at UCLA, as well as the  
23 Heat Transfer Memorial Award from the American Society of Mechanical  
24 Engineers. I am also an Adjunct Professor in the International Centre for Materials  
25 Science at the Jawaharlal Nehru Centre for Advanced Scientific Research  
26 (JNCASR) and co-direct the JNCASR-Purdue Joint Networked Centre on  
27 Nanomaterials for Energy. From 2009 to 2012, I served as a Research Scientist at  
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1 the U.S. Air Force Research Laboratory's newly formed Thermal Sciences and  
2 Materials Branch of the Materials and Manufacturing Directorate. I am active in  
3 service to the American Society of Mechanical Engineers through a variety of  
4 technical and leadership responsibilities, a former Co-Editor of the journal Energy  
5 Conversion & Management and currently Specialty Chief Editor for Thermal and  
6 Mass Transport of the journal Frontiers in Mechanical Engineering. Throughout my  
7 academic faculty career of 20 continuous years I have conducted teaching and  
8 research on mechanical engineering subjects ranging from engineering design to  
9 heat transfer to fluid mechanics. I have published extensively, authoring or co-  
10 authoring more than 300 peer-reviewed technical papers and two books.

11 4. I am being compensated for my time consulting in this matter at the  
12 rate of \$350 per hour. My salary is not dependent on the outcome of the case, and I  
13 have no personal interest or financial stake in this litigation or its outcome.

14 The Legal Standards I Am Using in this Declaration

15 5. I am not an attorney. For the purposes of this declaration, I have been  
16 informed about certain aspects of the law that are relevant to my analysis and  
17 opinion. In formulating my opinions, I have taken into account the following  
18 principles of the law regarding patent infringement, which I understand to be  
19 accurate statements of the law.

20 6. I understand that infringement involves a two-step analysis and that the  
21 first step involves determining the proper construction of the asserted claims.

22 7. I have been instructed that ultimately claims are construed by the judge  
23 in light of how one of ordinary skill in the art would understand the claims. It is my  
24 understanding that what is to be considered includes the language of the claims, the  
25 patent specification, the drawings, and the prosecution history, including any prior  
26 art listed by the Examiner or the applicant. It is my understanding that information  
27 external to the patent, including inventor and expert testimony and unlisted prior art,  
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1 are to be considered only if ambiguities remain. However, expert testimony may be  
2 useful in helping to explain the technology. I further understand that technical  
3 dictionaries, encyclopedias, and treatises may be used in claim construction, as long  
4 as these definitions do not contradict any definition found in or ascertained by a  
5 reading of the patent documents.

6       8. I understand that in arriving at the proper construction of the language  
7 of the claims of a patent, it is generally improper to bring requirements or  
8 limitations recited in the specification or drawings into the meaning of the claim  
9 terms. However, I understand that there are certain situations in which a patent may  
10 define a claim term in the specification and/or reference a particular aspect of the  
11 invention as being important or critical to the invention, and in such cases, it may be  
12 proper to construe a claim term in a more limited manner than its plain, ordinary  
13 meaning in the claim itself. I further understand that a patent file history may  
14 contain references that specifically limit the scope of a term used in the claims.

15       9. I understand that patent claims may be written in a format known as  
16 “means plus function” language in which particular claim language may be  
17 described in functional terms, such as a means for accomplishing a task, and that  
18 under this particular claiming format, the structure(s) that accomplishes the recited  
19 means or function would typically be recited elsewhere in the claims or in the patent  
20 specification.

21       10. I understand that the second step of the infringement analysis involves  
22 determining whether the accused products contain all of the elements of the asserted  
23 claims. A product is covered by and, thus, infringes a patent claim if the product  
24 meets or embodies each and every limitation of the patent claim, either literally or  
25 under the doctrine of equivalents. A method claim is infringed when each of the  
26 recited steps are performed.

1       11. I understand that an accused product literally infringes on a patent  
2 claim if it contains every limitation of the claim. I further understand that a prior art  
3 reference without express reference to a claim limitation may nonetheless anticipate  
4 under the doctrine of inherency, provided the prior art necessarily functions in  
5 accordance with, or includes, the claims limitations, it anticipates.

6       12. I understand that an accused product that does not literally infringe a  
7 claim may nonetheless infringe the claim under the doctrine of equivalents. It is my  
8 understanding that to establish infringement under the doctrine of equivalents, the  
9 accused product must be shown to include an equivalent for each claim limitation  
10 that is literally absent.

11       13. It is my understanding that infringement under the doctrine of  
12 equivalents may be established by showing that the elements of the accused product  
13 perform substantially the same function, in substantially the same way, to achieve  
14 substantially the same result as the corresponding elements of the patented  
15 invention. I further understand that DMF is not asserting infringement under the  
16 doctrine of equivalence at this time.

17       Sources Searched and References Cited

18       14. As part of this work, I conducted literature searches with respect to  
19 methodologies and techniques identified in the '266 Patent, Benya Declaration, and  
20 related documents. The '266 Patent is reproduced in Exhibit 19 of this Declaration.  
21 DMF's Motion for Preliminary Injunction, the Benya Declaration, and the '266  
22 Patent prosecution history are hereby incorporated by reference. The libraries,  
23 archives, and repositories that I searched during my analysis include the Web of  
24 Science, Google Scholar, the IEEE Xplore digital library, and the U.S. Patent and  
25 Trademark Office (USPTO) patent database. As a result of these searches, I  
26 retrieved and examined journal articles, conference papers, books, manuals, product  
27 specifications, and patents spanning more than two decades.

1       15. All references cited in this declaration were published in the open  
2 scholarly literature either in conference proceedings, in professional journals of  
3 wide distribution, and/or the internet. I reference various websites, all of which are  
4 accessible to anyone through the internet, as well as patents issued by the USPTO,  
5 all of which are part of the public record and freely accessible.

6           **Claim Construction for the ‘266 Patent**

7       16. As discussed above, infringement analysis involves a two-step process,  
8 the first of which involves determining the proper construction of the asserted  
9 claims in light of how a person of ordinary skill in the art would understand the  
10 claims and their plain, ordinary meaning.

11           **Definition of “Person of Ordinary Skill in the Art”**

12       17. I understand that with respect to the ‘266 Patent, the person of ordinary  
13 skill in the art should be a person with a degree in Mechanical or Electrical  
14 Engineering or closely related field, and several years of experience in designing  
15 recessed lighting devices and/or components.

16           **Construction of “Junction Box”**

17       18. The Benya Declaration and the ‘266 Patent construe a “junction box”  
18 as “a structure that separates the inner components of the recessed lighting system 1,  
19 including electrical wires/cables, from the items inside a ceiling or crawl space (e.g.,  
20 insulation) in which the junction box 2 has been installed” [Benya Declaration, page  
21 7, paragraph 17]. For the purpose of this Declaration, I will use this definition of  
22 “junction box”.

23           **Construction of “Light Source Module”**

24       19. The Benya Declaration and the ‘266 Patent construe a “light source  
25 module” as “the light source module 3 receives electricity from the driver 4 ... such  
26 that the light source module 3 may emit a controlled beam of light into a room or  
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1 surrounding area" [Benya Declaration, page 13, paragraph 26]. For the purpose of  
2 this Declaration, I will use this definition of "light source module".

3 Construction of "Driver"

4 20. The Benya Declaration and the '266 Patent construe a "driver" as "an  
5 electronic device that supplies and/or regulates electrical energy to the light source  
6 module 3 and thus powers the light source module 3 to emit light" [Benya  
7 Declaration, page 13, paragraph 27]. For the purpose of this Declaration, I will use  
8 this definition of "driver".

9 Construction of "Unified Casting"

10 21. The Benya Declaration and the '266 Patent applicant construe a  
11 "unified casting" as "a one-piece housing for the driver, the light source module and  
12 the reflector, while also acting as a heat sink thereby eliminating the need for any  
13 additional heat sink piece" [Benya Declaration, page 17, paragraph 36]. For the  
14 purpose of this Declaration, I will use this definition of "unified casting".

15 Construction of "Reflector"

16 22. The Benya Declaration and the '266 Patent construe a "reflector" as an  
17 object that "may surround the light source module 3 ... to adjust the way light  
18 emitted by the light source is focused inside a room or surrounding area" [Benya  
19 Declaration, page 18, paragraph 39]. For the purpose of this Declaration, I will use  
20 this definition of "reflector".

21 Construction of "Lens"

22 23. The Benya Declaration and the '266 Patent construe a "lens" as "a  
23 protective barrier for the light source module 3 ... and may also assist in the  
24 diffusion of light and increase the uniformity of light over the surface of the  
25 recessed lighting system" [Benya Declaration, page 18, paragraph 40]. For the  
26 purpose of this Declaration, I will use this definition of "lens".

1                   Construction of “Trim”

2                   24. The Benya Declaration and the ‘266 Patent construe a “trim” as an  
3 object that “serves the primary purpose of covering the exposed edge of the ceiling  
4 or wall where a hole is formed in which the recessed lighting system 1 resides while  
5 still allowing light from the light source module 3 to be emitted into a room through  
6 an aperture 22” [Benya Declaration, page 18, paragraph 41]. For the purpose of this  
7 Declaration, I will use this definition of “trim”.

8                   1. Elaboration of Definitions and Additional Issues

9                   25. This section elaborates on the definitions, meanings, and implications  
10 of several terms and phrases used in the ‘266 Patent.

11                   The Meaning of “Heat Conducting”

12                   26. The term ‘heat conduction’ refers to the transport of thermal energy,  
13 also known as heat, through a material that is nominally stagnant.<sup>1</sup> Heat conduction  
14 occurs by the thermally agitated motion of a variety of microscopic mechanisms in  
15 different substances: molecules in fluids, electrons in metals, atomic vibrations in  
16 nonmetals. By itself, heat conduction does not imply efficacy of cooling.

17                   The Meaning of “Dissipate Heat”

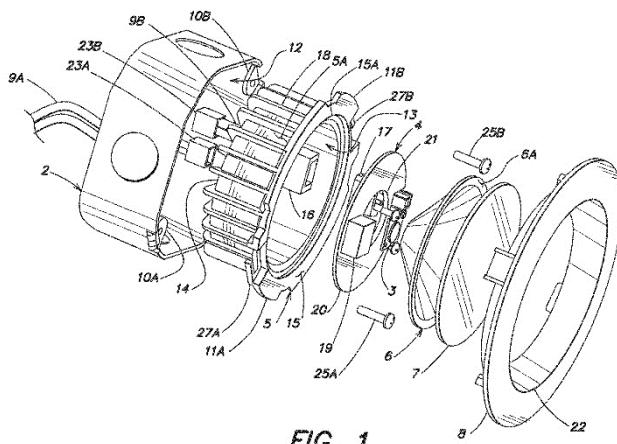
18                   27. The term ‘to dissipate’ means, according to Merriam-Webster, “to  
19 cause to spread thin or scatter and gradually vanish.”<sup>2</sup> The technical meaning in the  
20 context of the transfer of heat is consistent with this general definition, namely that  
21 to “dissipate heat” implies a spreading of heat such that it vanishes into the broader  
22 surroundings, typically by heat convection or radiation from a surface. If heat is  
23 continually supplied, then the process of heat dissipation will persist if a heat flow  
24 path to the surroundings exists.

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27  
28                   <sup>1</sup> T. Bergman et al., *Fundamentals of Heat and Mass Transfer*, 7<sup>th</sup> Ed., Wiley, pp. 3-12, 2011.

<sup>2</sup> Merriam-Webster Dictionary. <https://www.merriam-webster.com/dictionary/dissipate>

## 1 || The Meaning of “Closed Rear Face”

2        28. Contrary to the Benya Declaration, the ‘266 Patent construes the term  
3 “closed rear face” as the exterior surface of the casting. Both Figures 1 and 2 of the  
4 ‘266 patent clearly identify that the closed rear face **14** as well as the open front face  
5 **15** of the casting as the exterior surfaces:



15 (Figure 1 of the '266 Patent).

16        29. Additionally, the claims of the ‘266 Patent use the term “closed rear  
17 face” in a manner that would cause a person of ordinary skill to interpret the term as  
18 meaning the exterior surface of the rear wall.

19       30. First, only the exterior surface can “significantly dissipate heat  
20 generated by the light source module during operation” as recited at the end of both  
21 independent claims 1 and 17.

22       31. Second, to determine whether the “dimension between the heat  
23 conducting closed rear face and the open front face” is “less than 2 inches,” one  
24 would measure the distance between the two exterior surfaces. Indeed, DMF argued  
25 during prosecution that the claimed invention is distinguished over the prior art by  
26 being small enough to fit within a standard-sized junction box. I attach as Exhibit  
27 17 a true and correct copy of DMF’s February 6, 2018 Supplemental Amendment.  
28 At pp. 18-19 of this supplement amendment, DMF argued that “the claimed heat

1 conducting unified casting ... has a particular configuration and dimensions to  
2 facilitate recessing the unified casting substantially inside a standard-sized junction  
3 box....” It is the dimension between the **exterior** surfaces that determines that the  
4 patented configuration can fit recessed inside a standard-sized junction box.

5       32. Third, to determine whether “the light source module is closer to the  
6 closed rear face of the unified casting than the open front face of the unified  
7 casting,” one would compare the distances between the light source and the **exterior**  
8 surfaces of the front and back faces. One reason for this is consistency. The open  
9 front face has no internal surface to speak of because it is open. It has only an  
10 exterior surface (identified as reference numeral **15** in Figure 1 above).

11       The ‘266 Patent Is Invalid

12       The ‘266 Patent Is Invalid on Anticipation Grounds

13       33. I attach hereto as Exhibit 1 a true and correct copy of U.S. Patent No.  
14 9,222,661 to Jim Wook Kim et al. (“Kim”). The prior art Kim patent states a  
15 priority date of February 6, 2013 and discloses the structure recited in the  
16 independent claims of the ‘266 patent. Even if the Kim patent does not expressly  
17 disclose a plurality of elements positioned proximate to the open front face so as to  
18 align with corresponding tabs of a standard junction box, I understand that a prior  
19 art reference without express reference to a claim limitation may nonetheless  
20 anticipate under the doctrine of inherency.

21       34. Here, forming elements proximate to the open front face so as to align  
22 with a standard junction box is inherent in that normal use would require one to  
23 align and mount the device disclosed in the Kim reference. I therefore attach hereto  
24 as Exhibit 2 a claim chart (the “Kim Claim Chart”) showing how Kim anticipates  
25 representative claim 1 of DMF’s U.S. Patent No. 9,964,266 (“the ‘266 patent”), the  
26 patent-at-issue in the present action.

1       35. I attach hereto as Exhibit 3 a true and correct copy of relevant pages  
2 from a June 17, 2012 Imtra catalog (“Imtra”). The prior art Imtra product and  
3 product description was published at least by June 17, 2012. The Imtra catalog  
4 discloses the structure recited in the independent claims of the ‘266 patent. I  
5 therefore attach hereto as Exhibit 4 a claim chart (the “Imtra Claim Chart”) showing  
6 how the Imtra product and product description anticipates representative claim 1 of  
7 the ‘266 patent.

8       The ‘266 Patent Is Invalid on Obviousness Grounds

9       36. The Kim patent and Imtra product also render obvious the independent  
10 claims of the ‘266 patent.

11       37. Regardless of whether the Kim patent expressly discloses anything akin  
12 to “a plurality of elements positioned proximate to the open front face so as to align  
13 with corresponding tabs of a standard junction box,” the addition of such alignment  
14 features to Kim would have been obvious to a person of ordinary skill in the art.

15       38. Similarly, regardless of whether the side loops of Imtra product and  
16 product description are sufficiently akin to “a plurality of elements positioned  
17 proximate to the open front face so as to align with corresponding tabs of a standard  
18 junction box,” the addition of such alignment features to the Imtra product would  
19 have been obvious to a person of ordinary skill in the art.

20       39. Furthermore, I attach hereto as Exhibit 5 a true and correct copy of  
21 China Patent Publication No. CN202733693U to Foshan Huaquan Electrical  
22 Lighting Co. (“Foshan”). The prior art Foshan patent reference was published on  
23 February 13, 2013 and discloses a recessed lighting device that has a plurality of  
24 elements positioned proximate to the open front face so as to align with  
25 corresponding tabs of a standard junction box.

26       40. Additionally, by the priority date of the ‘266 Patent, numerous adaptor  
27 plates were available on the market for mounting such recessed electrical and  
28

1       electronics component to or inside a standard-sized junction box, such as the  
2       Blackman reference. I attach hereto as Exhibit 6 a true and correct copy of U.S.  
3       Patent No. 7,347,580 to Stephen Blackman (“Blackman”).

4       41.      The Kim patent, in combination with either the alignment features of  
5       Foshan or the adaptor plate of Blackman, renders obvious the independent claims of  
6       the ‘266 Patent since the combined teachings of these references disclose all the  
7       structure recited in the ‘266 Patent claims.

8       42.      I therefore attach hereto as Exhibit 7 a claim chart (the  
9       “Kim/Foshan/Blackman Claim Chart”) showing how Kim, in combination with  
10      either the alignment features of Foshan or the adaptor plate of Blackman for  
11      aligning and mounting such a device to or inside a standard-sized junction box,  
12      renders obvious representative claim 1 of the ‘266 Patent.

13       43.      I attach hereto as Exhibit 8 a claim chart showing how Imtra, in  
14      combination with either the alignment features of Foshan or the adaptor plate of  
15      Blackman for aligning and mounting such a device to or inside a standard-sized  
16      junction box, renders obvious representative claim 1 of the ‘266 Patent.

17       44.      I attach hereto as Exhibit 9 a true and correct copy of Japanese Patent  
18      Publication No. JP2007265961A to Goto Yoshiro et al. (“Yoshiro”). Yoshiro was  
19      published on October 11, 2007 and likewise renders obvious the independent claims  
20      of the ‘266 Patent because it, combined with the alignment features of Foshan or  
21      Blackman, discloses the structure recited in the claims. I attach hereto as Exhibit 10  
22      a claim chart (the “Yoshiro/Foshan/Blackman Claim Chart”) showing how Yoshiro,  
23      in combination with either Foshan or Blackman, renders obvious representative  
24      claim 1 of the ‘266 Patent.

25       45.      I attach hereto as Exhibit 11 a true and correct copy of U.S. Patent No.  
26      7,566,154 to Jennifer L. Gloisten et al. (“Gloisten”). Gloisten was published on  
27      March 27, 2008 and likewise renders obvious the independent claims of the ‘266  
28

1 patent. Gloisten, together with the alignment features of either Foshan or Blackman,  
2 discloses the structure recited in the claims of the '266 patent. I attach hereto as  
3 Exhibit 12 a claim chart (the "Gloisten/Foshan/Blackman Claim Chart") showing  
4 how Gloisten, in combination with either Foshan or Blackman, render obvious  
5 representative claim 1 of the '266 Patent.

6 46. I attach hereto as Exhibit 13 a true and correct copy of U.S. Patent No.  
7 7,488,097 to William Reisenauer et al. ("Reisenauer"). Reisenauer was published  
8 on August 23, 2007 and likewise renders obvious the independent claims of the '266  
9 Patent because it, combined with the alignment features of either Foshan or  
10 Blackman, discloses the structure recited in the claims. I attach hereto as Exhibit 14  
11 a claim chart (the "Reisenauer/Foshan/Blackman Claim Chart") showing how  
12 Reisenauer, in combination with either Foshan or Blackman, render obvious  
13 representative claim 1 of the '266 Patent.

14 47. I attach hereto as Exhibit 15 a true and correct copy of a September 9,  
15 2012 web page from Mouser Electronics advertising the Cree LMH2 product  
16 recorded and maintained by archive.org. The LMH2 online product description,  
17 combined with the alignment features of either Foshan or Blackman, discloses the  
18 structure recited in the independent claims of the '266 Patent.

19 48. I understand that DMF may have previously taken the position that the  
20 LMH2 is not relevant because it discloses an external driver, not enclosed under the  
21 reflector as required by the claims of the '266 Patent. The '266 Patent claims,  
22 however, recite the driver as including an electronic device to either supply or  
23 regulate the electrical energy to the light source module:

24 the driver including an electronic device to at least one of supply  
25 and regulate electrical energy to the light source module

26 (The '266 Patent, at claim 1, col, 8, lines 5-7).

1       49. As a result, it would not matter if the LMH2 device uses an external  
2 driver to supply the electrical energy to the light module. Whether or not the LMH2  
3 device uses an external driver to supply the electrical energy to the light module, the  
4 LMH2 appears to house an internal driver that includes an electronic device for at  
5 least regulating the electrical energy to the light source module, and this driver is  
6 indeed internal and enclosed under the reflector as shown in Exhibit 15. I attach  
7 hereto as Exhibit 16 a claim chart, therefore, (the “LMH2/Foshan/Blackman Claim  
8 Chart”) showing how the LMH2 product and product description, in combination  
9 with either Foshan or Blackman, render obvious representative claim 1 of the ‘266  
10 Patent.

11       50. Thus, the claims of DMF’s ‘266 Patent are a merely obvious  
12 combination of already known elements. The concept of having a compact recessed  
13 lighting system that can fit inside a standard junction box and be mechanically  
14 secured to it is not new, as demonstrated by the foregoing prior art references and  
15 the associated claim charts.

16       Elco’s Modified Light Module Does Not Infringe The ‘266 Patent

17       51. I here include the figure showing pictures of various assembled and  
18 disassembled Elco ELL light modules from Mr. Benya [Benya Decl., page 21,  
19 paragraph 48]. In each photograph, the modified Elco light module, referred to as  
20 “ELL1130 version 2” by Mr. Benya, is on the left side. The red circles added in the  
21 present Declaration highlight the “hat” and “cylindrical piece of aluminum” as  
22 described by Mr. Benya.



1       52. Mr. Benya further states that “there is probably little or no apparent  
2 functional advantage gained by adding the cylindrical piece and hat to the rear-end  
3 of the casting of the LED Module.” Here, I assume that the function at issue is to  
4 “significantly dissipate heat generated by the light source module during operation”  
5 as recited at the end of both claims 1 and 17. As such, the modified Elco light  
6 module fundamentally alters the function of the rear casting wall such that the latter  
7 does not dissipate, but instead, at least partially constricts the flow of heat such that  
8 heat conducts into the “cylindrical piece of aluminum.” This constricting the flow is  
9 functionally the opposite of “significantly dissipating heat.” [See, above, at p. 8,  
10 paragraph 27].

11       53. Moreover, the Benya Declaration and the ‘266 Patent applicant  
12 construe a “unified casting” as “a one-piece housing for the driver, the light source  
13 module and the reflector, while also acting as a heat sink thereby eliminating the  
14 need for any additional heat sink piece” [Benya Declaration, page 17, paragraph 36].  
15 The “cylindrical piece of aluminum” is obviously a good thermal conductor with  
16 substantial mass to act as an “additional heat sink piece” to absorb heat from the  
17 contacted casting and to conduct it for subsequent dissipation to the “hat.” Mr.  
18 Benya’s statement that “there is probably little or no apparent functional advantage  
19 gained by adding the cylindrical piece and hat to the rear-end of the casting of the  
20 LED Module” speaks to the relative functional performance of the Elco module with  
21 and without modification, but not to the clear distinction in function introduced by  
22 the “additional heat sink piece”.

23       54. Moreover, it is only the exterior surfaces of the sidewalls and the closed  
24 rear face, what Mr. Benya calls a “hat,” that can “significantly dissipate heat  
25 generated by the light source module during operation” as recited at the end of both  
26 independent claims 1 and 17. According to the principles of heat transfer, heat  
27 generated by the light source module during operation does not “significantly  
28

1 dissipate" to the surroundings from any interior constituents or intermediate  
2 surfaces. The essential and unique role of these external surfaces can be understood  
3 by imagining that all such surfaces were physically covered with thermal insulation.  
4 In such a case, heat would be completely confined to the constituents of the device  
5 and any internal gases (such as air), and under the action of a continual heat source  
6 such as an LED light, the constituent temperatures would monotonically increase in  
7 time until thermal failure of the light source would occur, thus eliminating the  
8 source of heat. This thought experiment demonstrates that an internal element or  
9 intermediate surface that does not possess an external surface cannot itself  
10 "significantly dissipate" heat.

11 55. I attach hereto as Exhibit 17 a true and correct copy of DMF's  
12 Supplemental Amendment filed February 6, 2018 during prosecution of the '266  
13 patent. I inspected one of Elco's modified ELL light modules and measured the  
14 distance between "the closed rear face and the open front face of the casting". I note  
15 that, given the alteration in function for heat dissipation discussed above for Elco's  
16 modified ELL light module, the measurement was made between the open front face  
17 and the tallest point of the "hat" as representative of the "closed rear face" and is not  
18 "less than 2 inches".

19 56. Furthermore, I am assured that nowhere and by no reasonable measure  
20 is the light source module of Elco's modified ELL light module closer to the closed  
21 rear face than the open front face.

22 57. If called to testify, I expect that my opinions would comport with the  
23 opinions I provide above. I reserve my rights, however, to continue to evaluate the  
24 evidence in this case and to revise and/or update my opinions and conclusions as  
25 such further evaluations warrant.

26 I declare under penalty of perjury under the laws of the United States and of  
27 the State of California that the foregoing is a true and correct statement of my  
28

1 opinions based on my experience and my review and analysis of the materials  
2 referenced above.

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4 Executed December 3, 2018 at Los Angeles, California.

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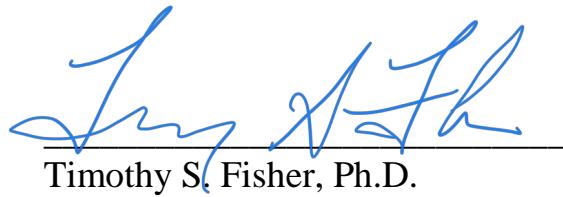
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A handwritten signature in blue ink, appearing to read "Timothy S. Fisher, Ph.D.", is written over a horizontal line. The signature is fluid and cursive, with a large, stylized 'T' at the beginning.